The effect of receiving child support on household income and labour supply: evidence from Australia

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How does child support receipt affect labour supply?

- Child support is a particularly contentious policy that is growing in importance
  - In Australia, 19% of families with children are lone parent families, and 21% of children have a parent living elsewhere (ABS 2015)
  - Projected growth of lone parent families to 28% of all families with children by 2031 (ABS 2010)
- Simple economic intuition suggests that increased child support receipt would have an **income effect** and so reduce labour supply, perhaps increasing government transfer receipt
- But, interactions with the system of government transfers mean it is not that straightforward

Results summary

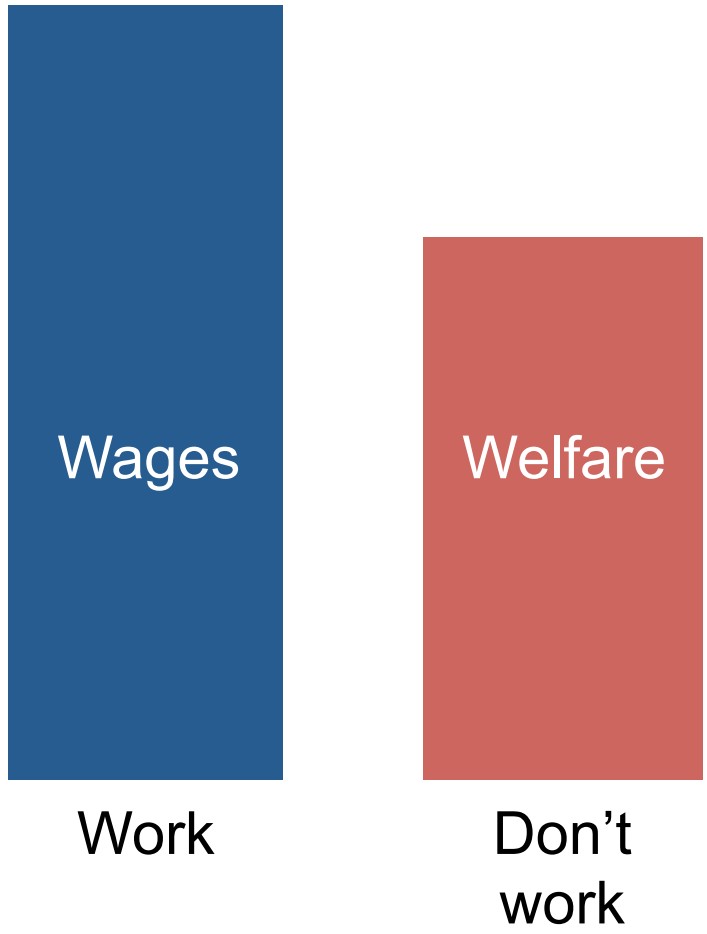
- Use HILDA to estimate labour supply effect of child support receipt in Australia
- Account for **reverse causality**: recipient's earned income affects child support amount
- Receiving any child support, and increased amount, leads to:
  - lower government transfer receipt
  - higher earned income
  - household income increase in excess of average amount of child support received
  - lower chance of being out of the labour market
  - higher probability of full time work
  - more hours worked

Child support receipt increases labour market attachment of separated mothers

Existing literature

- United States: Higher child support linked to higher labour supply and lower welfare participation (Hu 1999, Huang et al 2002, Neelakantan 2009)
- Denmark: higher child support payments reduce labour force participation of fathers and higher new-partner fertility for men and women (Rossin-Slater and Wust 2015)
- Australia: higher child support receipt not associated with labour force participation, but lower hours worked conditional on participation (Taylor and Gray 2010)

How does child support affect labour supply choice?



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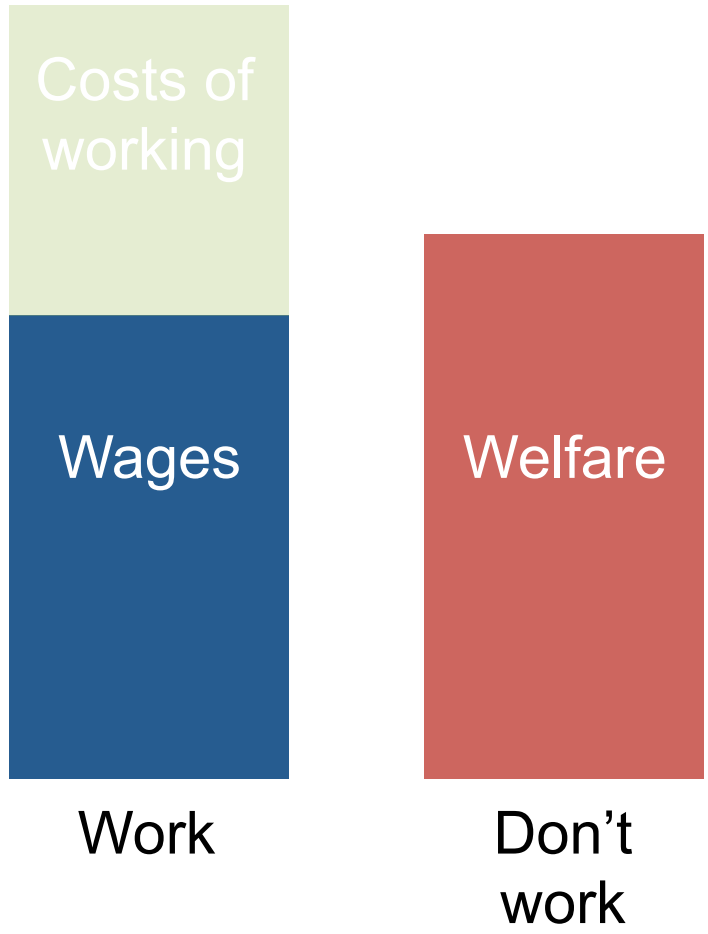

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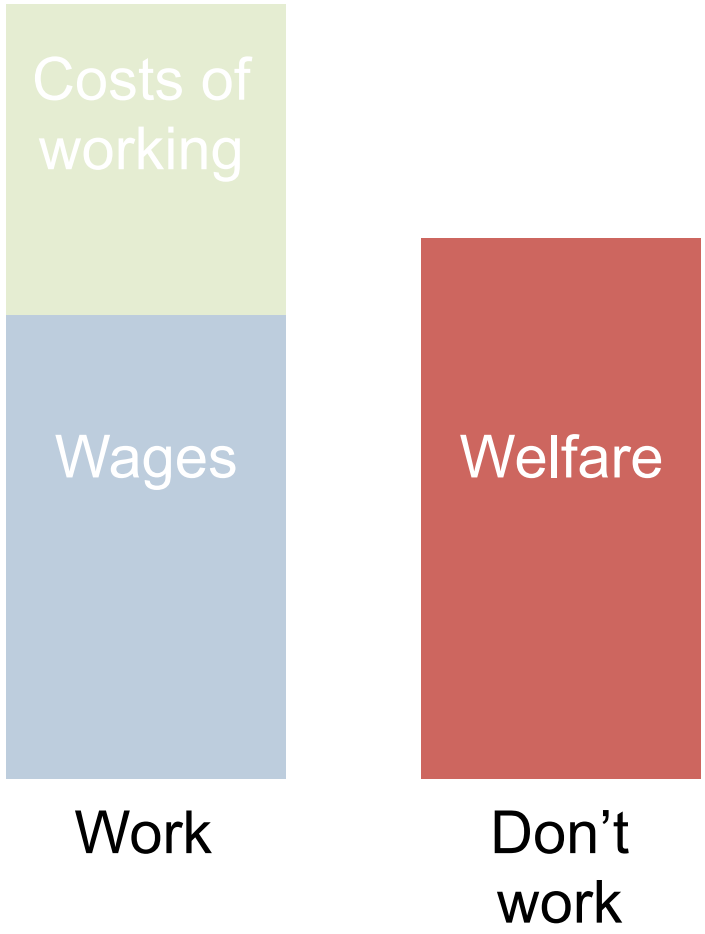
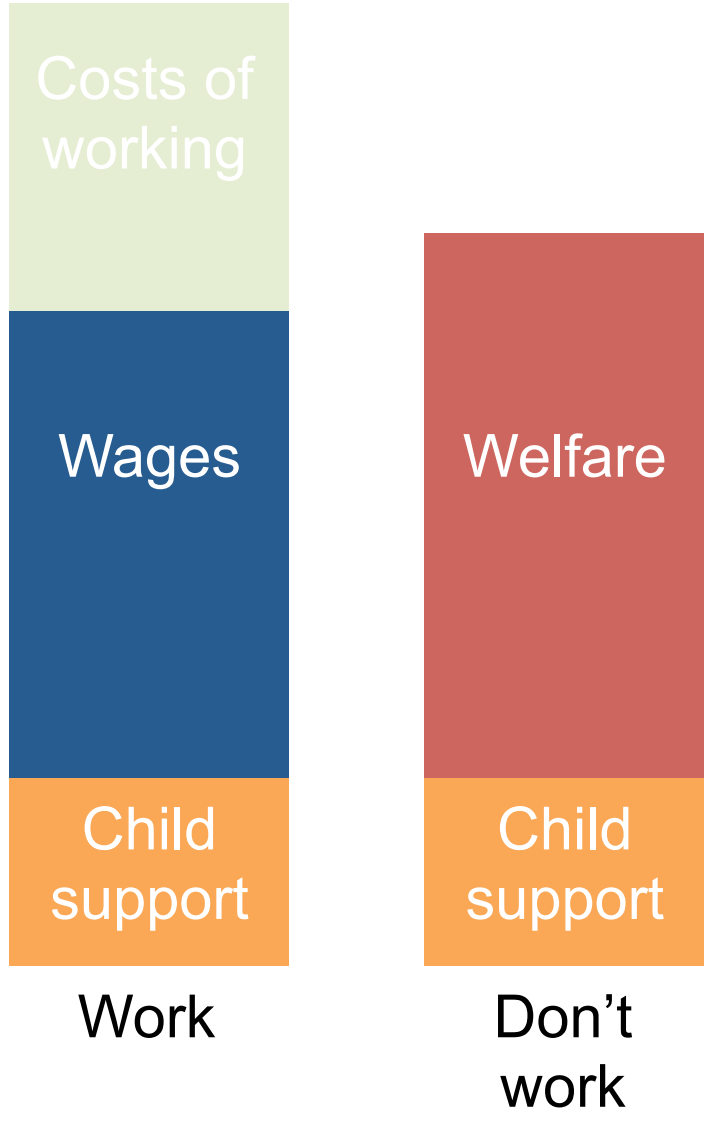


How does child support affect labour supply choice?

- Receive all child support regardless of welfare receipt



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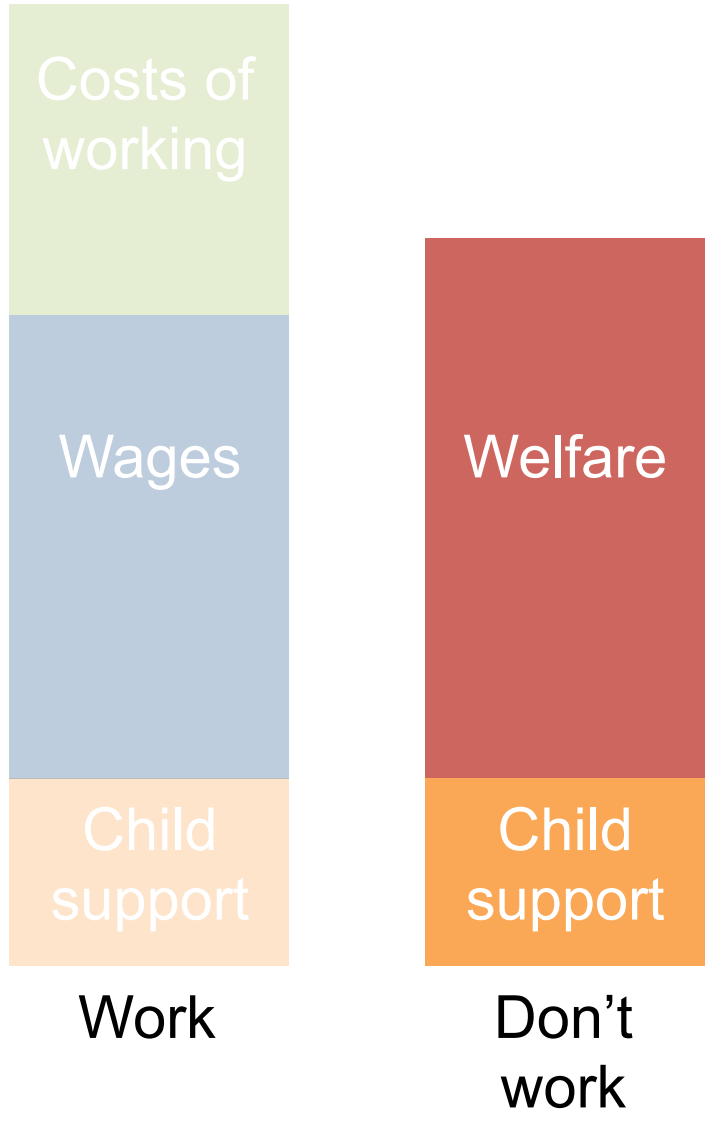

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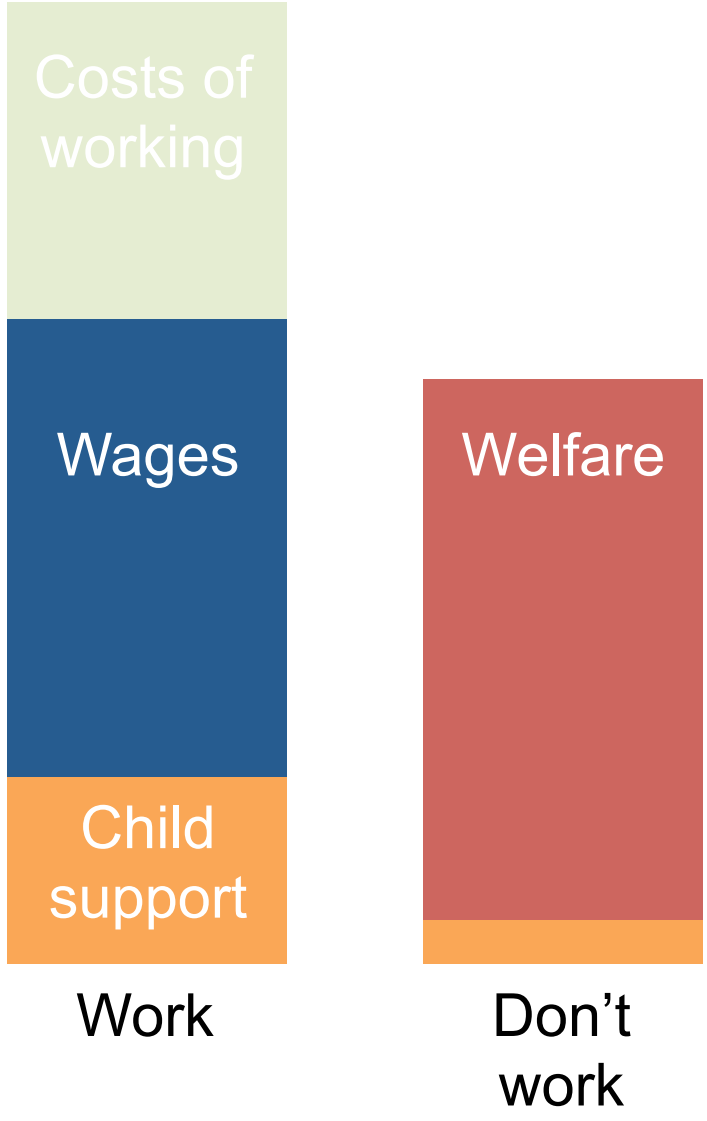

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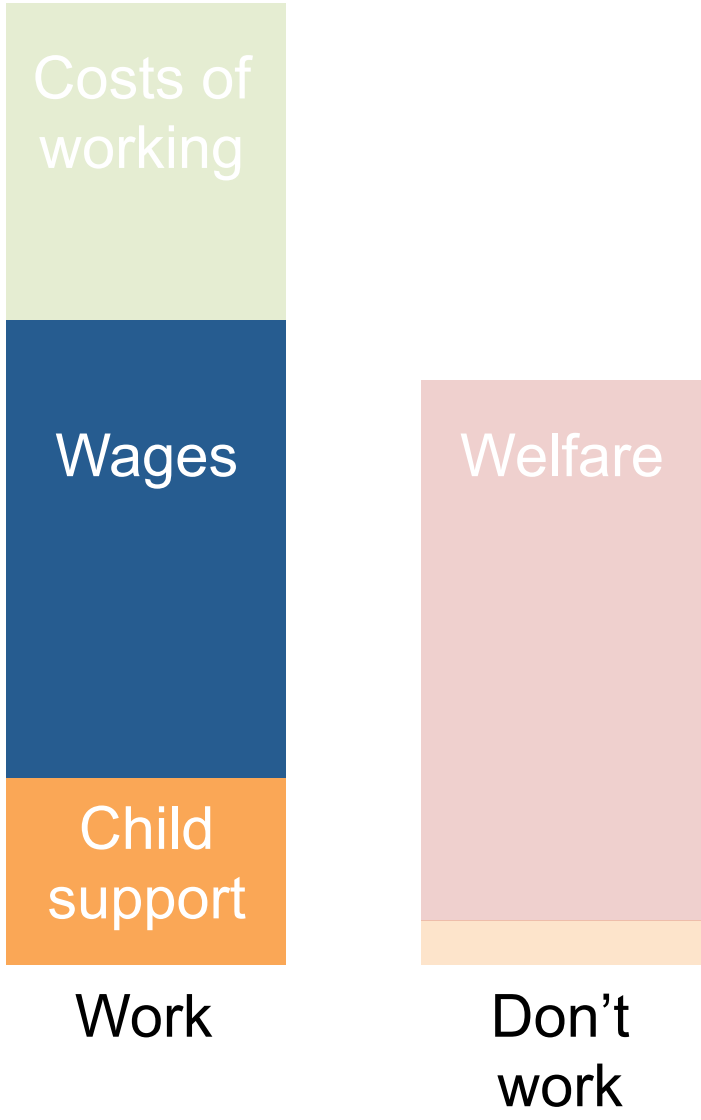


How does child support affect labour supply choice?

Receipt of child support more likely to lead to labour force participation if:

1. Amount of child support is high
2. Effective tax rate on child support is high

The Australian context

- Lone mother labour force participation ∼60% (vs. 76% in US)
- Ex-nuptial births at 34% (vs.41% in US, 47% in UK)
- ∼70-75% of ex-nuptial births to cohabiting couples

Most child support children lived with both parents for some period of time

Child support in Australia

- Three ways child support can be handled:
  - Outside of CSA (estimated 10-15% of parents)
  - CSA assessment, private transfer: 'Private Collect' (54% of CSA users, 2011-12)
  - CSA assessment, CSA collection: 'Child Support Collect'
- Parents can agree a different amount; 87% use formula amount
- Assessment adapts to changing circumstances
  - Based on latest tax return(s) and valid for maximum of 15 months
  - Reassessment can be requested by either parent at any time

Child support in Australia

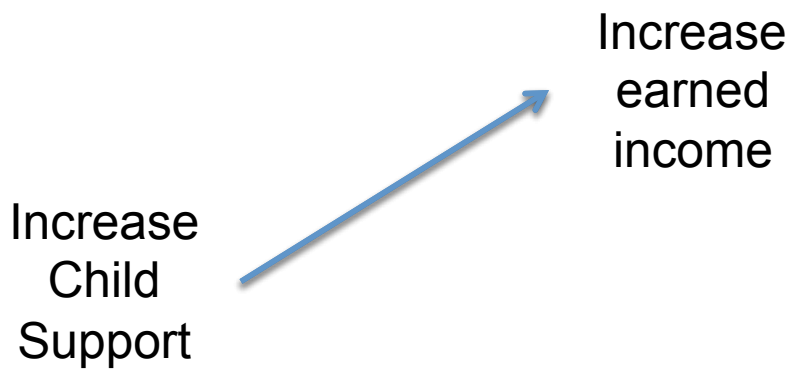
- Income support ('Parenting Payment') does not interact with child support (though counts as income for assessment)
- Interaction through Family Tax Benefit Part A (FTB)
  - $1522 of child support passes directly through (plus $507 for each additional child)
  - Then 50c in the dollar withdrawal of FTB (so effective 35% tax for $5,000 with 1 child)
  - Based on assessed amount, not amount received (unless CS Collect is used)
  - Must make a reasonable attempt to obtain child support (ie. get an assessment) to have FTB in excess of base level
- **Effective tax creates possibility of positive labour supply incentives; encourages use of CS Collect to account for any CS underpayment**

Central estimation problem

- Estimating the effect of receiving child support on a mother's income sources and labour market activity
- Problems:
  - As mother's labour income increases, child support received falls (through the formula)
  - When mother's household income is low, needs a child support assessment to get maximum FTB. Higher FTB encourages using CS Collect. This may increase child support received

Generates a negative correlation between labour supply and child support receipt, and a positive correlation between government transfers and child support

Central estimation problem



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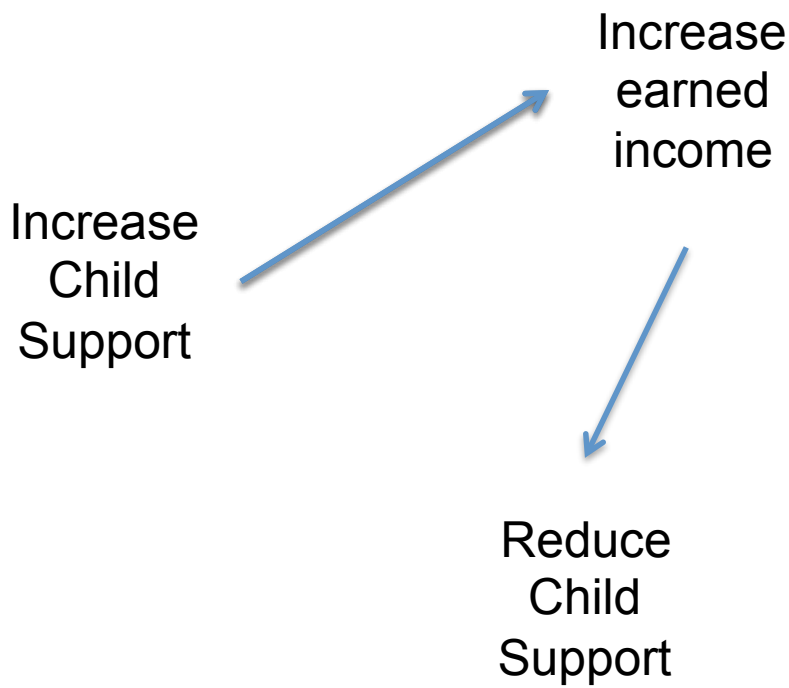

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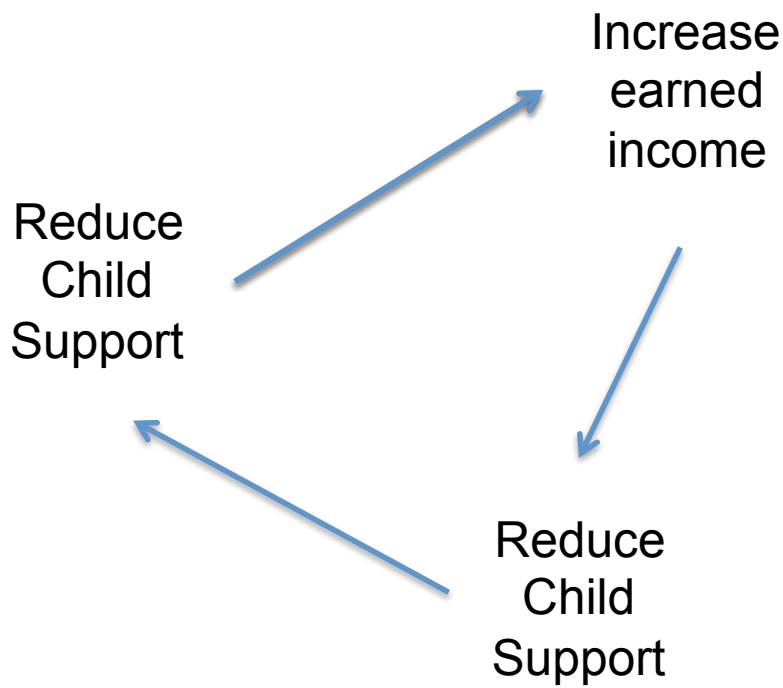

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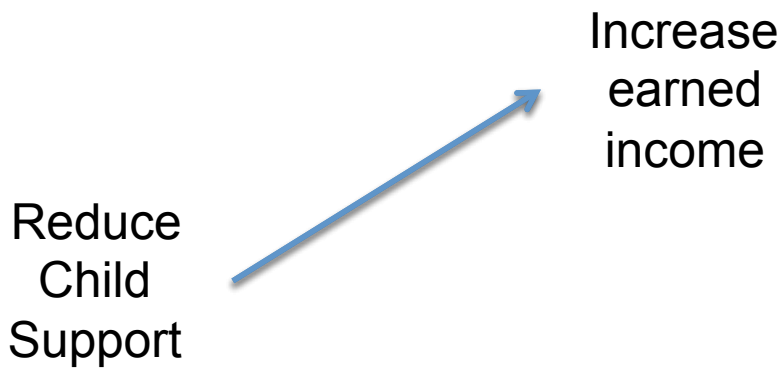

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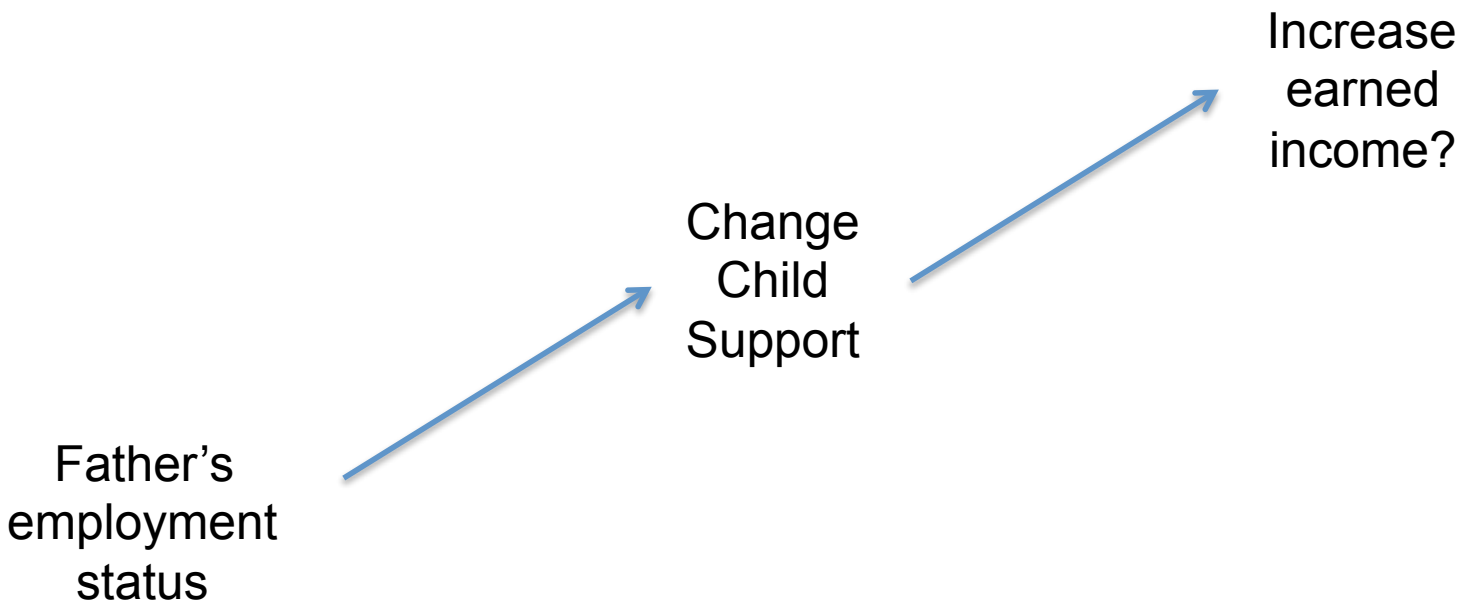

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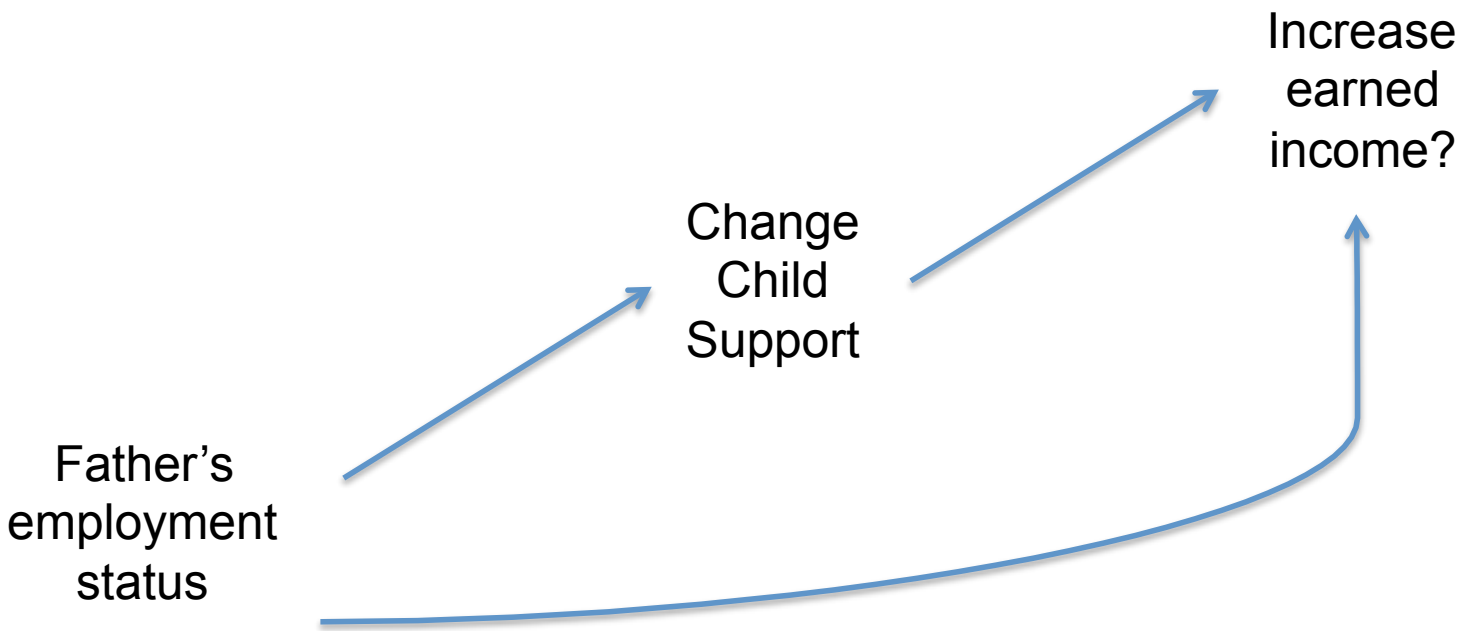

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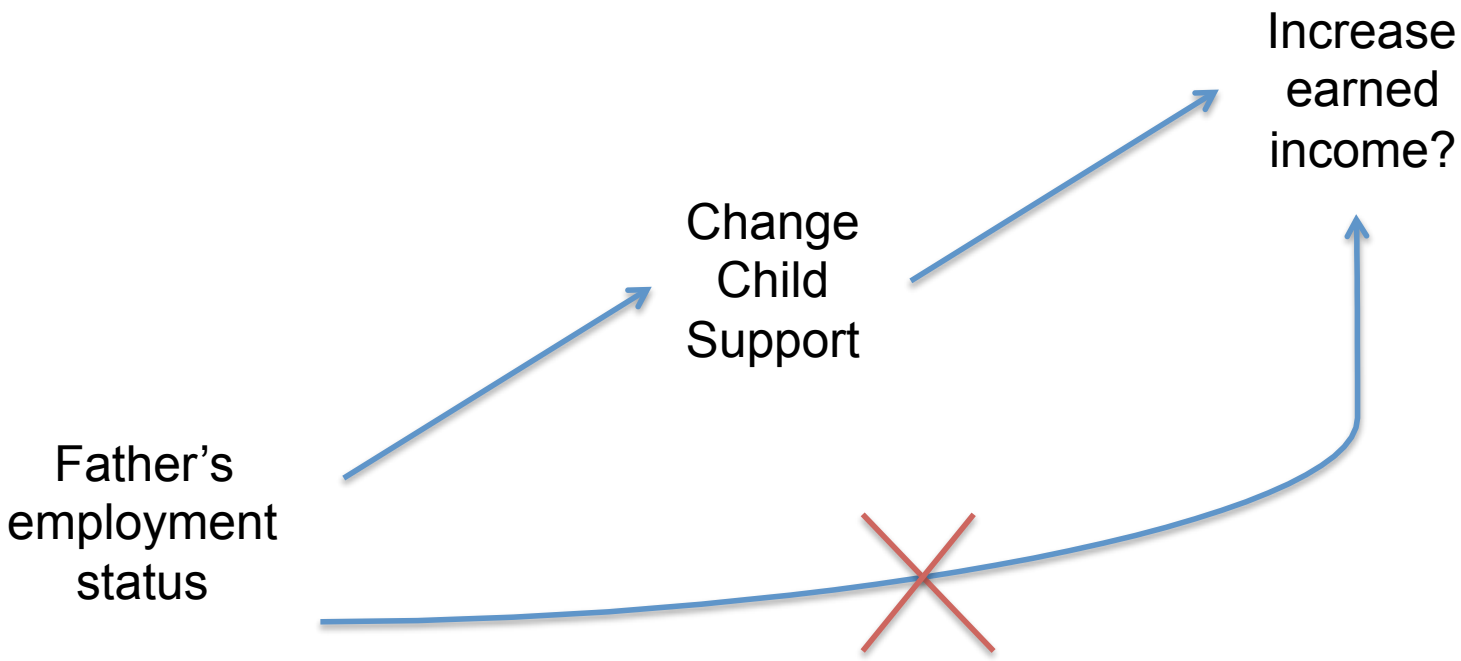

Concerns

- Joint decision making: separated parents jointly decide their labour market activity
- Other common characteristics affect both father's employment status and mother's employment status
  - Include a rich set of control variables
  - Unemployment and participation rates by state and gender, location indicators (state, remoteness), local area decile of index of economic resources
  - Pre-birth of child characteristics of mother: education, whether worked, whether took maternity leave, age at first birth, age left home, whether parents divorced, years since relationship broke down, relationship status with father at time of birth

Data

- Household, Income and Labour Dynamics in Australia Survey (HILDA)
- Large scale longitudinal survey, 13 waves from 2001 onwards
- Women with at least one child with a parent living elsewhere, where child is resident with mother at least 50% of time
  - Must report employment status of father in previous wave: wave 4 onwards
- 3123 observations for 867 women
- Limitations:
  - Little information about the father. More than half of sample enter HILDA as lone parents
  - Little information about the children: HILDA respondents must be aged over 15

Summary statistics: CS child

Characteristic	Mean	s.d.
Receives some child support	0.60	0.49
CS received (if >0) ($000)	5.12	5.64
Number of CS children	1.68	0.86
Age of youngest CS child	9.53	4.61
Primary care	0.34	0.47
Above primary care	0.56	0.50
10-50km from father	0.33	0.47
More than 50km from father	0.35	0.48
De facto	0.22	0.41
No relationship	0.21	0.41
Father's employment status (lagged)		
Part time	0.08	0.27
Unemployed	0.06	0.24
Not in the labour force	0.11	0.32
Years since relationship breakdown	6.57	4.16

Summary statistics: mother and household

Characteristic	Mean	s.d.
Age	39.32	8.83
Number of resident children	1.87	0.98
Born outside Australia (Anglo)	0.09	0.28
Born outside Australia (other)	0.07	0.26
Completed High School	0.13	0.34
Further education	0.35	0.48
Higher education	0.20	0.40
Age at first birth	24.87	5.55
Worked before birth	0.56	0.50
Took maternity leave	0.18	0.38
Part time	0.35	0.48
Unemployed	0.05	0.23
Not in the labour force	0.27	0.45
Government transfers ($000)	13.66	10.88
Market income ($000)	45.02	49.62
Gross income ($000)	62.22	44.68

Results: first stage regressions

	Any CS	Amount if >0 ($000)
Father's employment status last period		
Not employed	**-0.164**	**-3.008**
	(0.031)	(0.369)
Number of CS children	0.028	**1.640**
	(0.031)	(0.421)
Proportion of care category		
Primary	**0.255**	**1.392**
	(0.044)	(0.566)
Above primary	**0.224**	0.766
	(0.045)	(0.571)
Observations	3123	1868
Individuals	867	615
F-statistic	28.3	66.3

Other controls: age, age squared, total number of children in mother's household, mother's education, age at first birth, age left home, indicator for parents ever divorced, distance from father, state unemployment and participation rates by sex, wave indicators, state indicators, remoteness area indicators, indicators for decile of Index of Economic Resources of local area

Results: household income sources

	Any CS		Amount if >0 ($000)	
	OLS	IV	OLS	IV
Government transfers	0.385	**-8.503**	0.028	*-0.449*
	(0.410)	(3.670)	(0.045)	(0.254)
Market income	-2.720	**43.329**	**-0.562**	**2.617**
	(1.988)	(15.226)	(0.269)	(0.994)
Total income	2.435	**48.923**	**0.498**	**3.050**
	(1.806)	(14.552)	(0.231)	(0.869)

Bold indicates significance at 5% level; italic indicates significance at 10% level. Standard errors clustered at individual level. Full set of controls as in first stage regressions above

Results: labour market participation

	Any CS		Amount if >0 ($000)	
	OLS	IV	OLS	IV
Not in labour force	-0.006	-0.260	*0.004*	**-0.029**
	(0.018)	(0.164)	(0.002)	(0.013)
Employed	0.009	0.236	-0.004	**0.031**
	(0.019)	(0.159)	(0.002)	(0.012)
Full time	**-0.048**	**0.233**	**-0.006**	**0.023**
	(0.020)	(0.153)	(0.002)	(0.010)
Part time	**0.057**	0.003	0.002	0.017
	(0.022)	(0.183)	(0.003)	(0.013)
Hours worked	-0.965	**12.936**	**-0.201**	**1.381**
	(0.715)	(5.721)	(0.087)	(0.377)

Bold indicates significance at 5% level; italic indicates significance at 10% level. Standard errors clustered at individual level. Full set of controls as in first stage regressions above

Results summary

- Receiving any child support is associated with receiving less government transfers and earning more market income, meaning higher household income overall
- Conditional on receiving child support, household gross income goes up by three times the amount of child support received due to the increase in market income
- Any increase in labour market activity appears to operate through an increase in full time employment, not in part time employment

Results summary – subgroups

- Pre-2008, larger effects on government transfers, post-reform, larger effects on hours worked
- All income changes stronger for lower education group; part time employment more important for this group
- Lone parents and parents with above 85% care drive all results

Results by subgroups

Conclusions

- Results suggest that any concern child support discourages mothers' labour supply unfounded
  - Broad evidence that receiving any child support, and receiving more child support, do not decrease hours worked or market income earned by receiving mothers
  - Receiving any child support leads to an increase in employment and a decrease in being out of the labour force
- So, increasing the level of child support could increase household income of separated mothers without negative labour supply consequences
- In contrast, reducing the effective tax on child support could bring labour force disincentives
- As for policy implications, this is only half of the story...
  - Need to know more about the effect of higher payments on payers

Results: pre- and post-reform (IV only)

	Pre-2008			2008 onwards		
	Any CS	Amount	Average	Any CS	Amount	Average
Gov. transfers	-10.002	**-0.835**	13.232	-7.287	-0.105	13.927
	(6.091)	(0.316)		(4.368)	(0.326)	
Market income	60.566	**3.424**	39.705	*37.803*	*2.230*	48.320
	(29.542)	(1.186)		(17.390)	(1.296)	
Gross income	**68.213**	**3.542**	56.734	**43.020**	**2.935**	65.641
	(29.626)	(1.025)		(16.369)	(1.139)	
Not in labour force	-0.438	**-0.041**	0.318	-0.232	-0.024	0.247
	(0.331)	(0.016)		(0.183)	(0.016)	
Employed	0.189	**0.036**	0.625	0.260	*0.030*	0.721
	(0.325)	(0.015)		(0.182)	(0.015)	
Full time	0.209	**0.033**	0.280	0.223	0.017	0.356
	(0.288)	(0.013)		(0.171)	(0.013)	
Part time	-0.020	-0.003	0.346	0.037	0.013	0.345
	(0.322)	(0.017)		(0.208)	(0.017)	
Hours	9.968	**1.544**	19.176	**14.043**	**1.354**	22.482
	(11.311)	(0.455)		(6.580)	(0.536)	

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Results: education group (IV only)

	Low education			High education		
	Any CS	Amount	Average	Any CS	Amount	Average
Gov. transfers	-8.061	**-1.051**	16.290	-6.400	-0.031	11.487
	(5.022)	(0.484)		(4.825)	(0.265)	
Market income	*35.215*	**4.831**	35.325	39.331	0.999	53.022
	(19.124)	(1.986)		(22.901)	(1.125)	
Gross income	**36.164**	**4.592**	54.829	**51.440**	*1.918*	68.336
	(18.038)	(1.770)		(22.466)	(0.979)	
Not in labour force	-0.206	-0.032	0.398	-0.242	*-0.026*	0.172
	(0.236)	(0.025)		(0.237)	(0.014)	
Employed	0.214	*0.045*	0.531	0.177	0.019	0.788
	(0.233)	(0.024)		(0.220)	(0.013)	
Full time	-0.033	0.003	0.224	**0.545**	**0.033**	0.412
	(0.159)	(0.015)		(0.272)	(0.013)	
Part time	0.247	*0.042*	0.308	-0.368	-0.015	0.376
	(0.243)	(0.024)		(0.292)	(0.015)	
Hours	6.817	**1.303**	15.685	**18.252**	**1.298**	25.782
	(6.987)	(0.703)		(9.363)	(0.457)	

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Results: partner status (IV only)

	Lone parent			New partner		
	Any CS	Amount	Average	Any CS	Amount	Average
Gov. transfers	**-7.725**	**-0.637**	15.917	*-10.647*	0.224	9.317
	(3.668)	(0.266)		(5.588)	(0.417)	
Market income	**26.159**	**2.269**	28.284	*62.937*	1.948	77.209
	(11.382)	(0.822)		(25.062)	(1.611)	
Gross income	**31.028**	**2.502**	48.021	**66.932**	**3.077**	89.553
	(11.212)	(0.756)		(24.433)	(1.379)	
Not in labour force	**-0.384**	**-0.040**	0.279	0.032	-0.008	0.264
	(0.193)	(0.015)		(0.244)	(0.024)	
Employed	0.284	**0.038**	0.661	0.042	0.002	0.692
	(0.180)	(0.014)		(0.246)	(0.021)	
Full time	0.274	**0.027**	0.322	0.260	0.016	0.335
	(0.176)	(0.012)		(0.241)	(0.018)	
Part time	0.010	0.011	0.339	-0.218	-0.014	0.357
	(0.216)	(0.015)		(0.314)	(0.024)	
Hours	**15.843**	**1.773**	21.019	7.071	0.335	21.589
	(6.959)	(0.492)		(8.006)	(0.711)	

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Results: proportion of care (IV only)

	Less than 85%			Above Primary (>85%)		
	Any CS	Amount	Average	Any CS	Amount	Average
Gov. transfers	-2.317	-0.229	13.082	*-9.726*	-0.275	14.106
	(2.907)	(0.498)		(5.327)	(0.233)	
Market income	**29.316**	1.492	46.628	29.977	**1.768**	43.772
	(13.129)	(1.873)		(19.407)	(0.899)	
Gross income	**35.760**	2.058	63.609	**39.700**	**2.447**	61.158
	(12.234)	(1.611)		(18.523)	(0.812)	
Not in labour force	-0.186	-0.036	0.227	-0.273	*-0.021*	0.310
	(0.181)	(0.032)		(0.225)	(0.011)	
Employed	*0.311*	0.050	0.717	0.151	**0.023**	0.637
	(0.177)	(0.032)		(0.213)	(0.010)	
Full time	-0.040	-0.011	0.329	0.313	**0.023**	0.325
	(0.140)	(0.020)		(0.221)	(0.009)	
Part time	*0.351*	**0.061**	0.388	-0.161	0.000	0.312
	(0.185)	(0.032)		(0.267)	(0.012)	
Hours	7.655	1.038	22.382	*14.136*	**1.180**	20.314
	(6.075)	(0.931)		(7.790)	(0.324)	

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